

REMARKS

Applicants respectfully traverse and request reconsideration.

Claims 17, 20 and 22-24 stand rejected under 35 U.S.C. §101 because the claimed invention is allegedly directed to non-statutory subject matter. Applicants have amended the Specification as suggested in the office action to remove the reference to “carrier waves” in paragraph 108. Accordingly, Applicants respectfully request withdrawal of the rejection.

Claims 1, 4, 7-9, 12, 14-17 and 20 and 22-26 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Rosman et al. in view of Blythe et al., U.S. Patent No. 5,999,196 (Storm et al.) and Sperber et al. The office action alleges, among other things, that the Storm reference teaches a unified shader. The office action cites column 5, lines 17-20 and column 12, lines 28-67 as well as column 5, lines 45-54 as allegedly teaching a unified shader that performs both color shading and texture address shading and in particular, the ALU/memory pair or floating point box 152 and SRAMs 153. However, Applicants respectfully submit that the words “shade” or “shader” are not mentioned anywhere in the Storm specification and in fact, the Storm reference, as best understood, actually teaches a non-unified shader approach by utilizing a separate texture pixel processor 426, pixel data mux 432 and separate pixel processor 434 as shown in FIG. 7.

The Storm reference teaches that it is the draw processor 172 that does the texture address retrieval from texture memory 430 using the texture pixel processor 426 whereas a separate pixel processor 434 is used to perform pixel operations. Storm teaches a separate texture pixel processor and a separate pixel processor configuration which is an opposite and different architecture from that claimed by Applicants. As also described in Storm, the floating point box 152 outputs “triangles” (see for example, column 8, lines 61-63) that are then

processed by the separate texture pixel processor or pixel processor. As such, Applicants respectfully submit that the Storm reference does not teach a unified shader and accordingly, the claims are in condition for allowance.

In addition, the dependent claims are novel and non-obvious. For example, but not by way of limitation, claims 7 and 8 require a Z buffer logic unit that interfaces with a scan converter through a hierarchical Z interface as well as an early Z interface. As such, two types of Z or depth tests interfaces are coupled to the scan converter. Claim 8 requires that the unified shader interfaces to the Z buffer logic through a late Z interface. No such structure is taught or suggested by the Rosman reference as alleged. In fact, no portion of Rosman has been identified as teaching any of this subject matter. The claims describe a particular depth function structure occurring in connection with different structure and points in a pipeline none of which appears to be taught or suggested in the Rosman reference. As such, Applicants respectfully submit that the claims are in condition for allowance.

If the rejection is maintained, Applicants again respectfully request a showing by column and line number of where the Rosman reference teaches this structure since it does not appear to be taught in the reference.

Applicants respectfully submit that the claims are in condition for allowance and respectfully request that a timely Notice of Allowance be issued in this case. The Examiner is invited to contact the below-listed attorney if the Examiner believes that a telephone conference will advance the prosecution of this application.

Respectfully submitted,

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